

Listing of the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claims 1-63 (cancelled)

64. (previously presented) A method for forming a polarizing coating on a curved surface of a substrate comprising:
 - a) providing a substrate having a curved surface;
 - b) providing a flexible apparatus;
 - c) depositing a polarizing liquid on an area of the substrate curved surface or on the flexible apparatus;
 - d) applying the flexible apparatus on the curved surface of the substrate so that the flexible apparatus matches the curvature of the substrate curved surface;
 - e) moving the flexible apparatus past the deposited polarizing liquid and the substrate, whereby a film of the polarizing liquid is formed by shear flow on the substrate curved surface;
 - f) drying the film of polarized liquid to form a polarizing coating; and
 - g) recovering the substrate having a curved surface with a polarized coating thereon.
65. (previously presented) The method of claim 64, wherein the polarizing liquid is disposed on the curved surface prior to shear flow.
66. (previously presented) The method of claim 64, wherein the polarizing liquid is disposed on the flexible apparatus prior to shear flow.
67. (previously presented) The method of claim 66, wherein the polarizing liquid is disposed on the periphery of the flexible apparatus.
68. (previously presented) The method of claim 64, wherein said substrate is placed in a holder such that the substrate curved surface is freely accessible said holder having an external surface surrounding the substrate curved surface.

69. (previously presented) The method of claim 68, wherein the polarizing liquid of step c) is deposited on an area of the holder external surface.
70. (previously presented) The method of claim 69, wherein the polarizing liquid is disposed on the holder between the substrate and the flexible apparatus prior to shear flow.
71. (previously presented) The method of claim 70, wherein the polarizing liquid is disposed in a substantially straight line.
72. (previously presented) The method of claims 68 wherein the flexible apparatus is applied during step d) on the holder external surface between its periphery and the deposited polarizing liquid.
73. (previously presented) The method of claim 68, wherein the holder external surface is a curved surface.
74. (previously presented) The method of claim 68, wherein the holder external curved surface has the same curvature as the substrate curved surface.
75. (previously presented) The method of claim 68, wherein the flexible apparatus is configured to be attached to a holder apparatus.
76. (previously presented) The method of claim 64, wherein the shear flow is linear shear flow.
77. (previously presented) The method of claim 64, wherein the flexible apparatus is a flexible rod.
78. (previously presented) The method of claim 77, wherein the flexible rod is biased to apply a pressure force substantially normal to the holder external surface and substrate curved surfaces during entire moving step (f).
79. (previously presented) The method of claim 77, wherein the flexible rod is preformed to an accurate shape prior to application step (e) of the flexible rod on the holder external surface.

80. (previously presented) The method of claim 77, wherein the flexible rod has an external surface provided with a plurality of circumferentially spaced grooves.
81. (previously presented) The method of claim 77, wherein the flexible rod comprises a flexible core having a wire wrapped around.
82. (previously presented) The method of claim 64, wherein the flexible apparatus comprises a circular, rectangular, or spherical portion.
83. (previously presented) The method of claim 64, wherein a material is wrapped around the flexible apparatus.
84. (previously presented) The method of claim 83, wherein the material is a wire.
85. (previously presented) The method of claim 64, wherein the flexible apparatus comprises a groove.
86. (previously presented) The method of claim 64, wherein the flexible apparatus comprises etching.
87. (previously presented) The method of claim 64, wherein the flexible apparatus comprises a substantially smooth surface.
88. (previously presented) The method of claim 64, wherein the flexible apparatus is rotatable.
89. (previously presented) The method of claim 64, wherein the flexible apparatus is not rotatable.
90. (previously presented) The method of claim 64, where the curved surface has not been treated to create an orientation prior to the coating.
91. (previously presented) The method of claim 64, where the substrate is coated with a material prior to the rotating.

92. (previously presented) The method of claim 91, where the material is an adhesion primer layer.
93. (previously presented) The method of claim 92, where the adhesion primer layer comprises a coupling agent.
94. (previously presented) The method of claim 64, wherein the substrate curved surface is a convex surface.
95. (previously presented) The method of claim 64, further comprising adjusting a dye in the polarizing liquid to customize a color of the polarized coating.
96. (previously presented) The method of claim 64, wherein the polarized coating has a contrast ratio of at least 8.
97. (previously presented) The method of claim 64, where the polarized coating has a contrast ratio of at least 30.
98. (previously presented) The method of claim 64, where the polarized coating has a contrast ratio of at least 50.
99. (previously presented) The method of claim 64, where the polarized coating includes lyotropic liquid crystal material.
100. (previously presented) The method of claim 64, where the surface has not been treated to create an orientation prior to the shear flow.
101. (previously presented) The method of claim 64, wherein the substrate is a lens.
102. (previously presented) The method of claim 101, where the curved surface is a convex surface and the lens has a concave surface substantially opposite the convex surface.
103. (previously presented) The method of claim 101, where the lens further comprises one or more layers disposed on the convex surface.

104. (previously presented) An apparatus to dispose a coating onto a convex portion of a lens comprising a flexible portion so that the flexible portion matches the curvature of the lens and the said flexible portion is configured to dispose a coating by shear flow.
105. (previously presented) The apparatus of claim 104, wherein the flexible portion is a flexible rod.
106. (previously presented) The apparatus of claim 104, wherein the flexible portion comprises a circular, rectangular, or spherical portion.
107. (previously presented) The apparatus of claim 104, wherein a material is wrapped around the flexible portion.
108. (previously presented) The apparatus of claim 107, wherein the material is a wire.
109. (previously presented) The apparatus of claim 104, wherein the flexible portion comprises a groove.
110. (previously presented) The apparatus of claim 104, wherein the flexible portion comprises etching.
111. (previously presented) The apparatus of claim 104, wherein the flexible portion comprises a substantially smooth surface.
112. (previously presented) The apparatus of claim 104, wherein the flexible portion is rotatable.
113. (previously presented) The apparatus of claim 104, wherein the flexible portion is not rotatable.
114. (previously presented) The apparatus of claim 104, wherein the apparatus is configured to be attached to a holding apparatus.
115. (previously presented) The apparatus of claim 114, wherein the holding apparatus is adjustable in length or width.

116. (previously presented) The apparatus of claim 114, wherein the holding apparatus comprises an aperture.
117. (previously presented) The apparatus of claim 116, wherein the aperture is configured to accept the apparatus comprising a flexible portion.
118. (previously presented) The apparatus of claim 114, wherein the holding apparatus comprises a branch.
119. (previously presented) The apparatus of claim 118, wherein the branch is configured to accept the apparatus comprising a flexible portion.
120. (previously presented) The apparatus of claim 118, wherein the branch is removable.